



**Installation Manual
For
Dimension4™ Concerto
Home Cinema Acoustical Tuning System**



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Introduction

Every home cinema is affected by room acoustics. Allow the articulation, tonal balance, and clarity of your loudspeakers to be heard. Don't chance missing important elements within the soundtrack. The Dimension4 Concerto system is a high quality, easy-to-install acoustical tuning solution for home cinemas and listening rooms. Based on scientifically-designed building blocks including Absorbers, Diffusers, Bazorbers, and Ceiling Panels, Concerto is calculated to provide optimum absorption and diffusion and is a full-frequency component solution.

Dimension4 Concerto modules can be installed in minutes by observing the following simple instructions.



Modules



Wedge Absorber

Construction: A 24" x 48" x 1" to 3.5" taper (60cm x 120cm x 2.5 to 9cm) wedge shaped absorber consisting of a dense mineral wool core in a fiberglass sheath, wrapped in fabric.

Benefits: Wider response without visual bulk. Up to a 50% higher absorption coefficient and provides absorption down to 250Hz and up to 20kHz.



Wedge Diffuser

Construction: A 24" x 48" x 1" to 3.5" taper (60cm x 120cm x 2.5 to 9cm) wedge shaped liner well diffuser made of low resonance Polystyrene with different well depths for broader frequency range, wrapped in fabric.

Benefits: Shaped to match Concerto system components. Frequency range from 500Hz and up to 5kHz



Wedge Baffle

Construction: A 24" x 48" x 1" to 3.5" taper (60cm x 120cm x 2.5 to 9cm) wedge shaped slotted Helmholtz resonator made of low resonance Polystyrene with diaphragm absorber face, wrapped in fabric.

Benefits: Shaped to match Concerto system components. Frequency range from 100Hz and up to 250Hz



Ceiling Panel

Construction: A 24" x 48" x 1" (60cm x 120cm x 2.5cm) flat panel consisting of a mineral wool core clad in a fiberglass lining wrapped in fabric, with hanging hoops

Benefits: Provides absorption down to 300Hz

Tools and Materials Required

- Screwdriver (Philips or standard depending on the type of fastener)
- Hammer
- 25 Foot 8(m) Measuring Tape
- Pencil
- Masking Tape
- Bubble or Laser Level
- Mirror
- Screws or other appropriate fasteners for your wall surface (E-Z Anchor works well for sheetrock)
- Screw Hooks

Panel Placement

Concerto systems are suitable for a wide variety of room sizes. The bigger the room, the larger the number of treatment panels.

The following diagrams show sample room layouts for four ranges of room sizes. For best results, you will need to find the first reflection points between the speakers and the listening position. (See instructions later in this manual.)

Room Size (ft ²)	(m ²)	Kit	Number of Modules
100-200	10-20	150 System	14
200-300	20-30	250 System	18
300-400	30-40	350 System	21
400-500	40-50	450 System	25
500-600	50-60	550 System	28
600-700	60-70	650 System	32

100-200 ft² (10-20 m²) Room Using Dimension4 Concerto 150 System

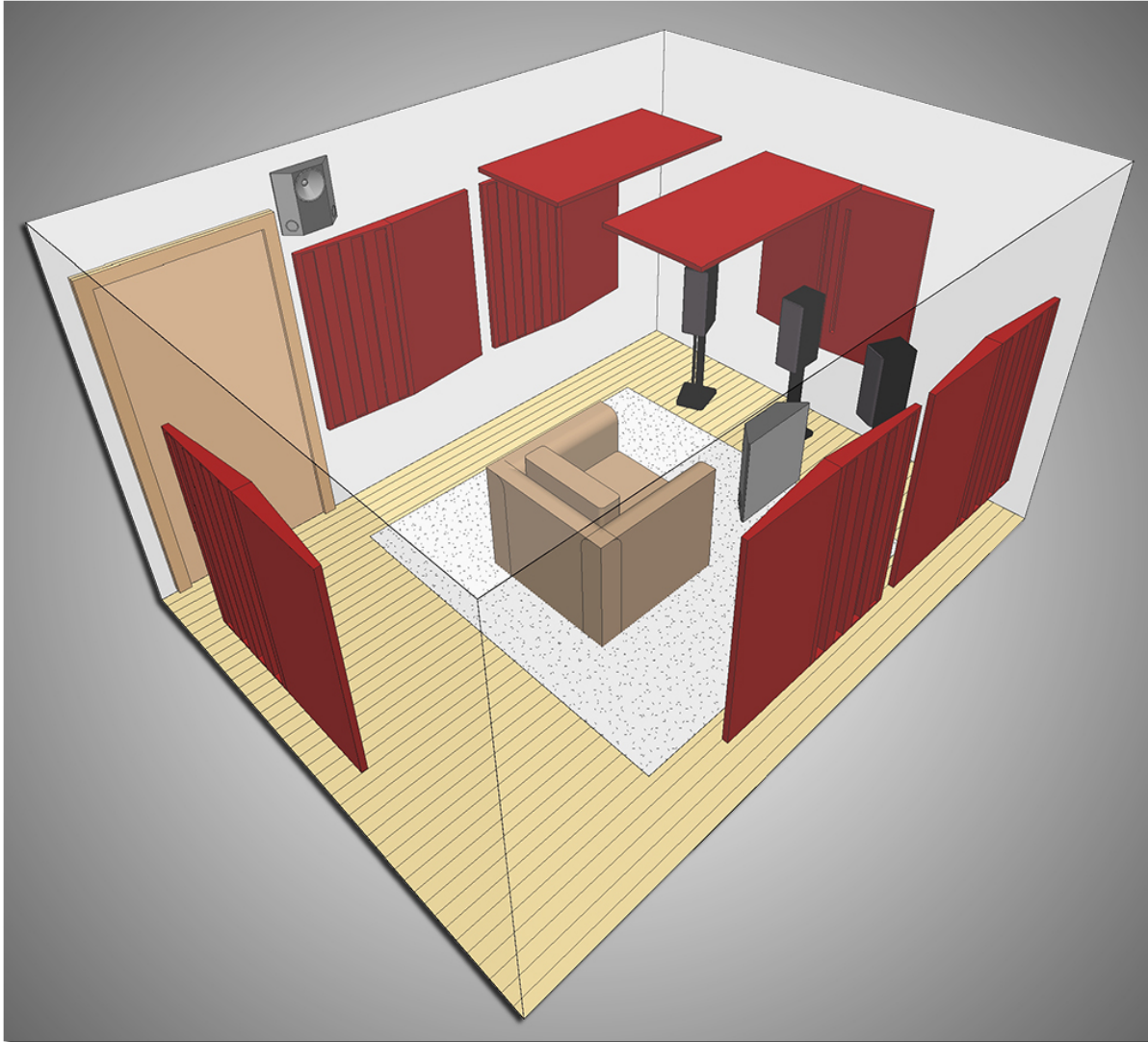


Fig 1

Dimension4 Concerto 150

- 5 Wedge Absorbers
- 5 Wedge Diffusers
- 2 Wedge Bazzorbers
- 2 Ceiling Panels

200-300 ft² (20-30 m²) Room Using Dimension4 Concerto 250 System

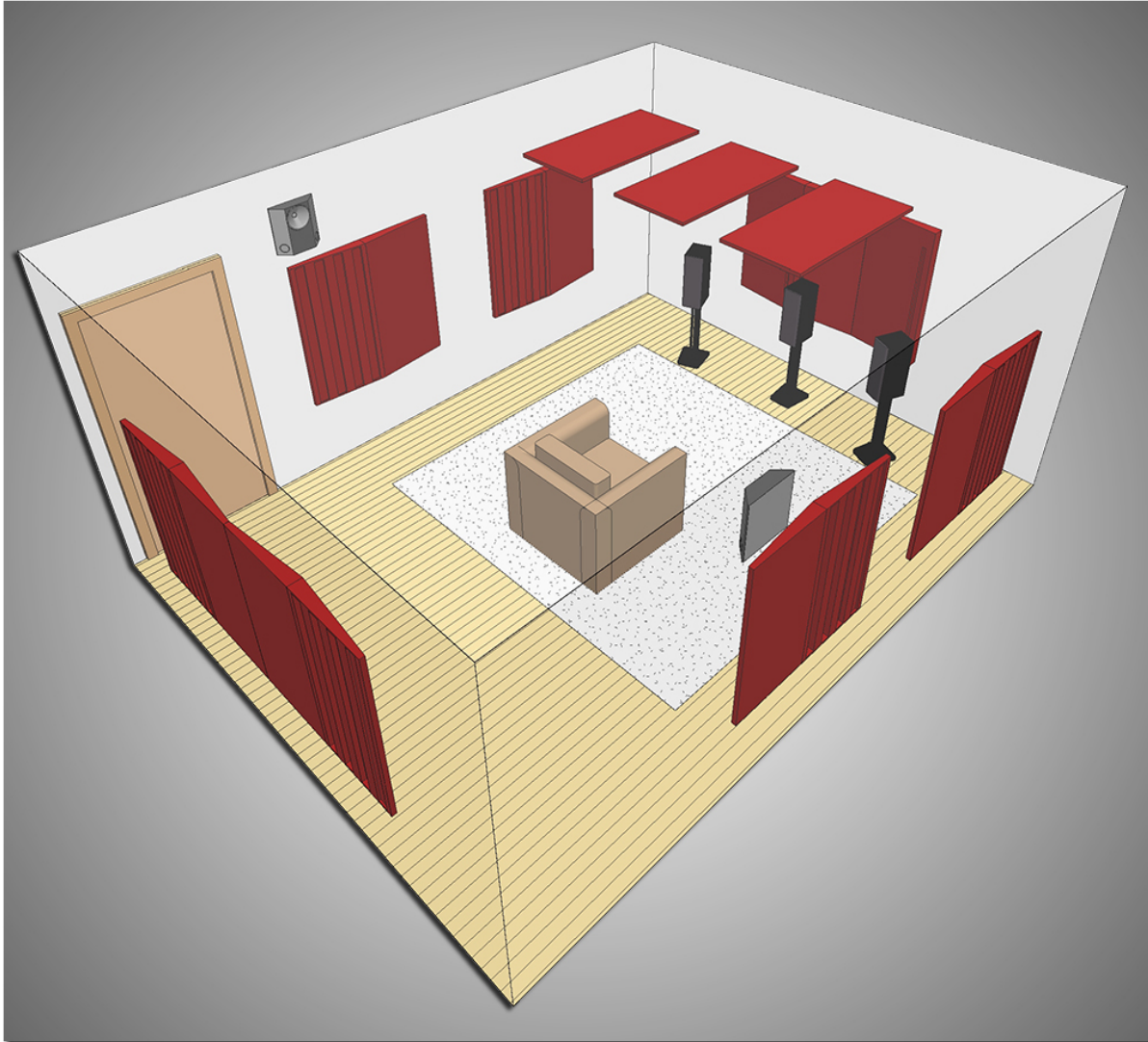


Fig 2

Dimension4 Concerto 250

- 6 Wedge Absorbers
- 6 Wedge Diffusers
- 3 Wedge Bazorbers
- 3 Ceiling Panels

300-400 ft² (30-40 m²) Room Using Dimension4 Concerto 350 System

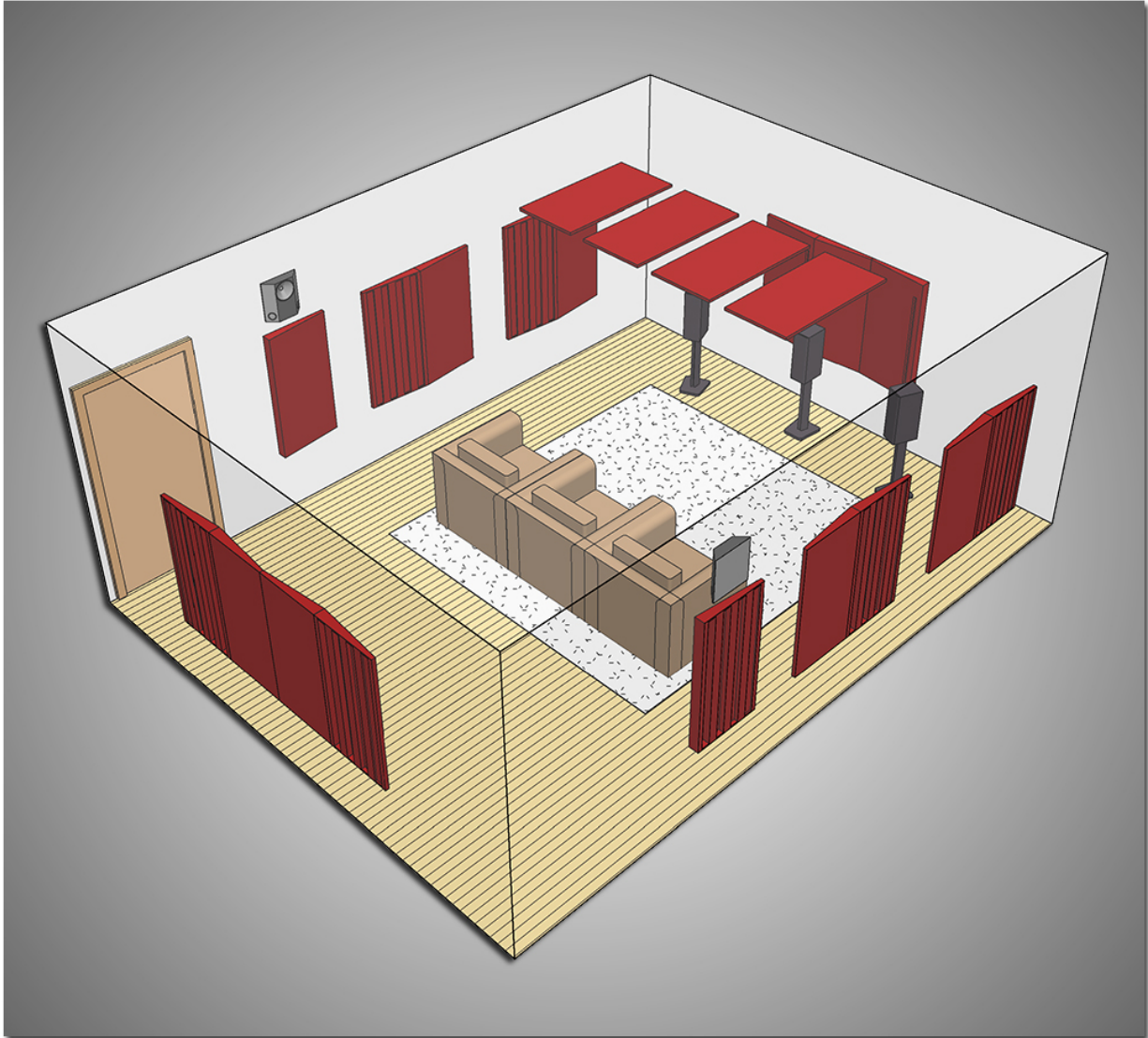


Fig 3

Dimension4 Concerto 350

- 7 Wedge Absorbers
- 7 Wedge Diffusers
- 3 Wedge Bazorbers
- 4 Ceiling Panels

400-500 ft² (40-50 m²) Room Using Dimension4 Concerto 450 System

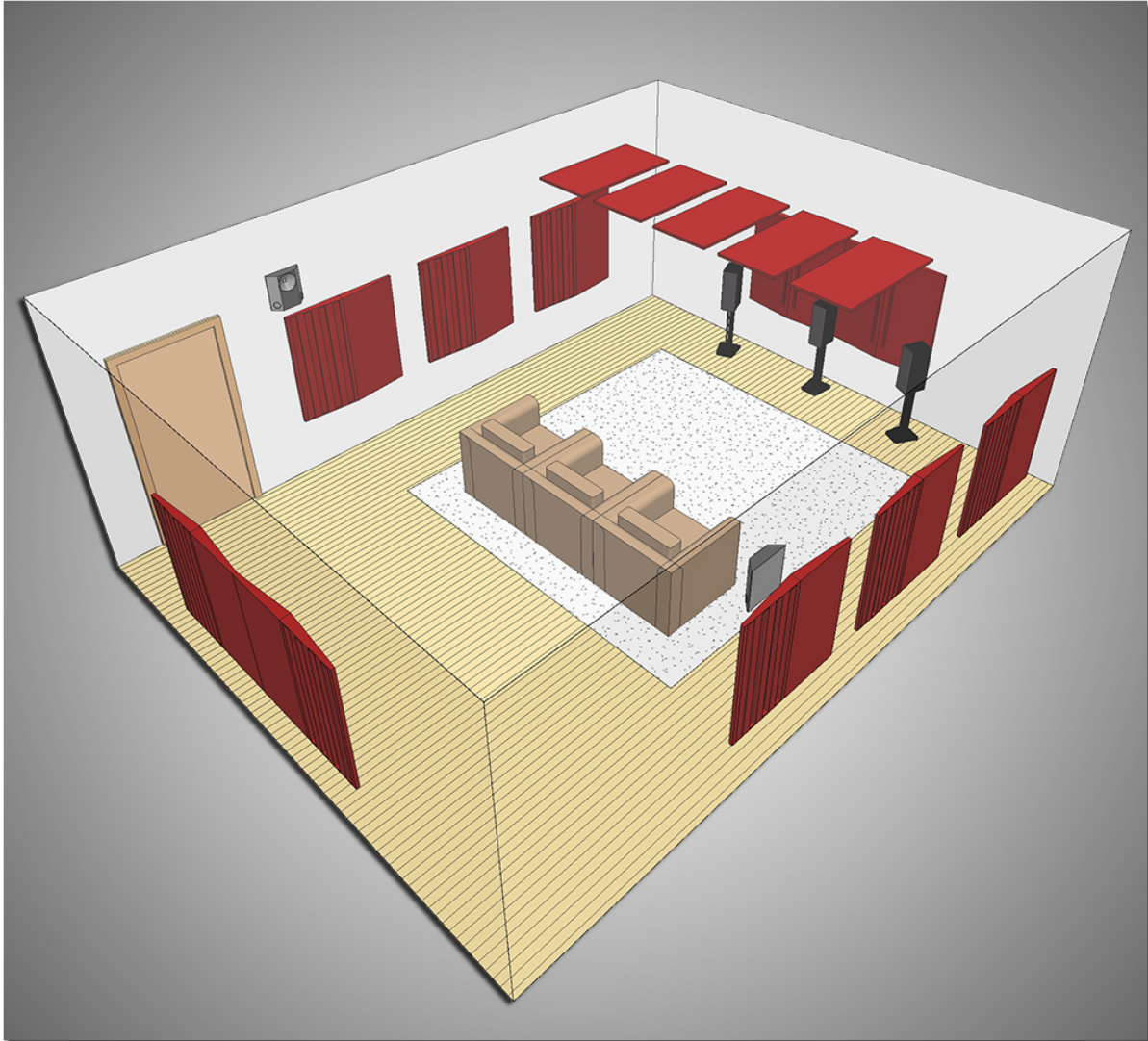


Fig 4

Dimension4 Concerto 450

- 8 Wedge Absorbers
- 8 Wedge Diffusers
- 4 Wedge Bazorbers
- 5 Ceiling Panels

500-600 ft² (50-60 m²) Room Using Dimension4 Concerto 550 System

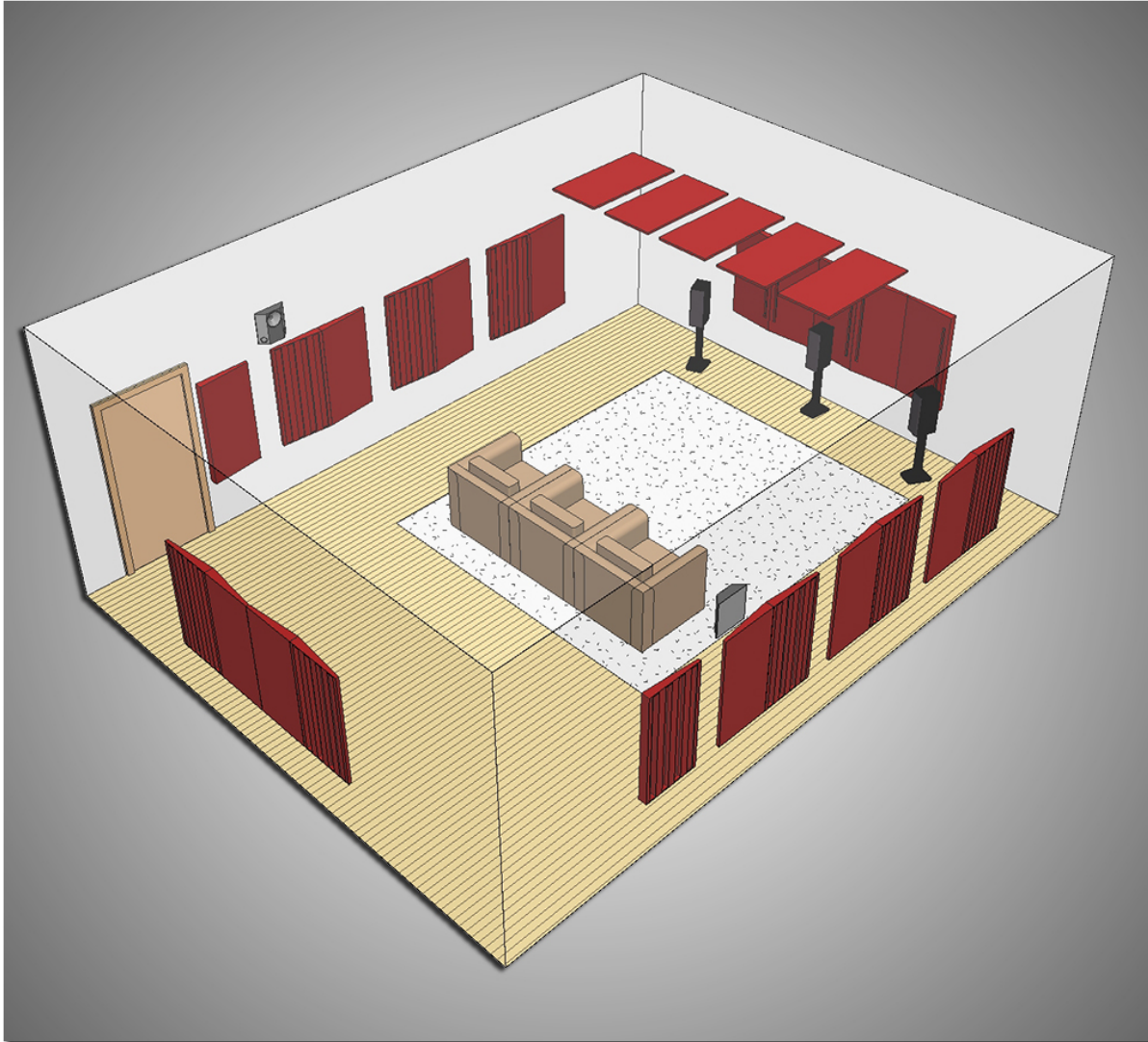


Fig 5

Dimension4 Concerto 550

- 9 Wedge Absorbers
- 9 Wedge Diffusers
- 5 Wedge Bazzorbers
- 5 Ceiling Panels

600-700 ft² (60-70 m²) Room Using Dimension4 Concerto 650 System

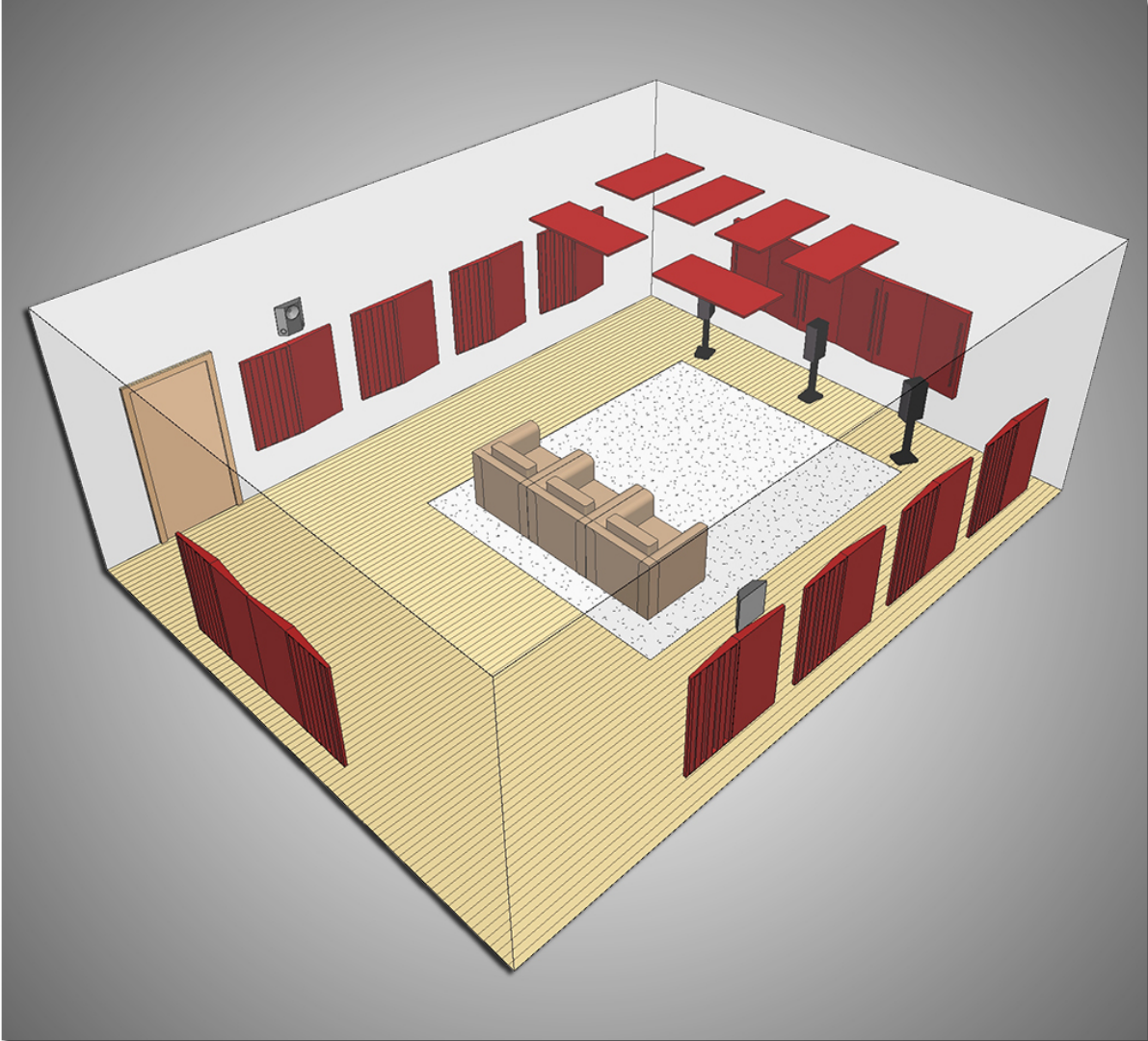


Fig 6

Dimension4 Concerto 650

- 10 Wedge Absorbers
- 10 Wedge Diffusers
- 6 Wedge Bazorbers
- 6 Ceiling Panels

Placement Guidelines:

First Reflection Points

The module layout shown in figures 1 through 6 gives you great control over the acoustic reflections in your room. For further enhancement, ensure that you have placed Absorbers at all the first reflection points on the side and back walls. You can find these by simply using a mirror as shown in fig 7. Sit at the main listening position and have someone walk up and down the left wall holding the mirror flat against it. Mark an X at the point where you can see the left speaker in the mirror. Repeat for the right wall and back wall. (You should be able to see both speakers at the first reflection point on the back wall.) Later on, you will be covering these X's with Absorbers.

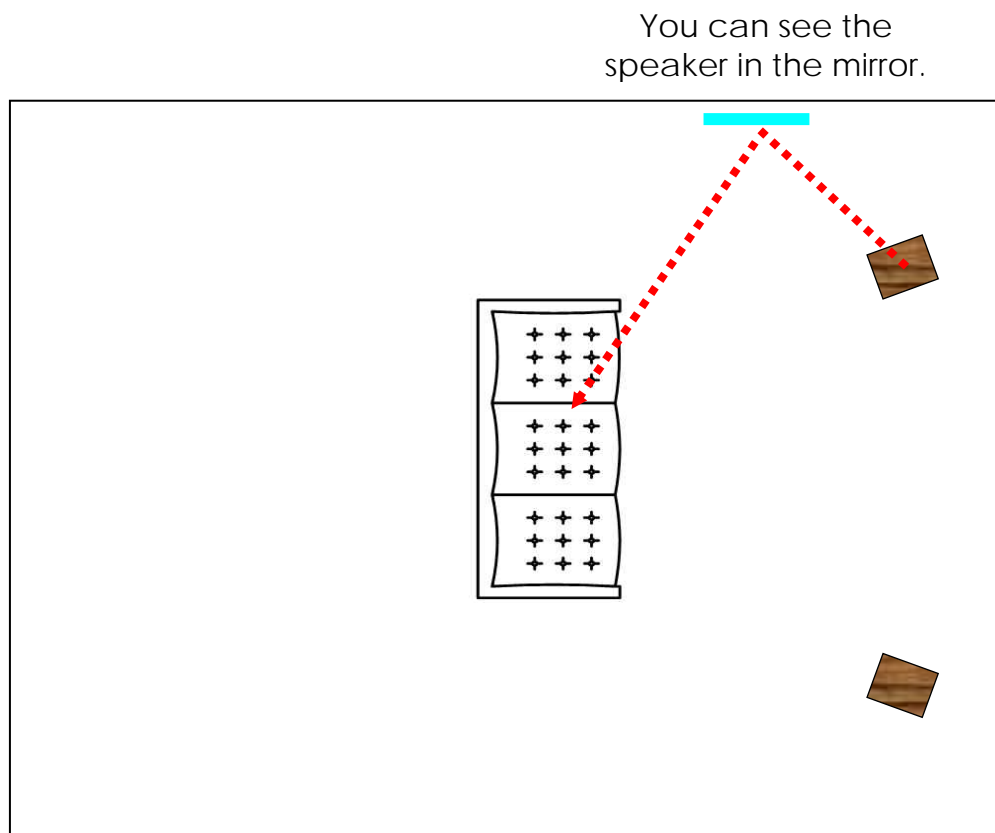


Fig 7 First Reflection Point

Panel Installation

The mounting brackets will typically be at the same heights throughout the room. We recommend using a laser level to mark the heights of all the top and bottom brackets so as to ensure a level installation.

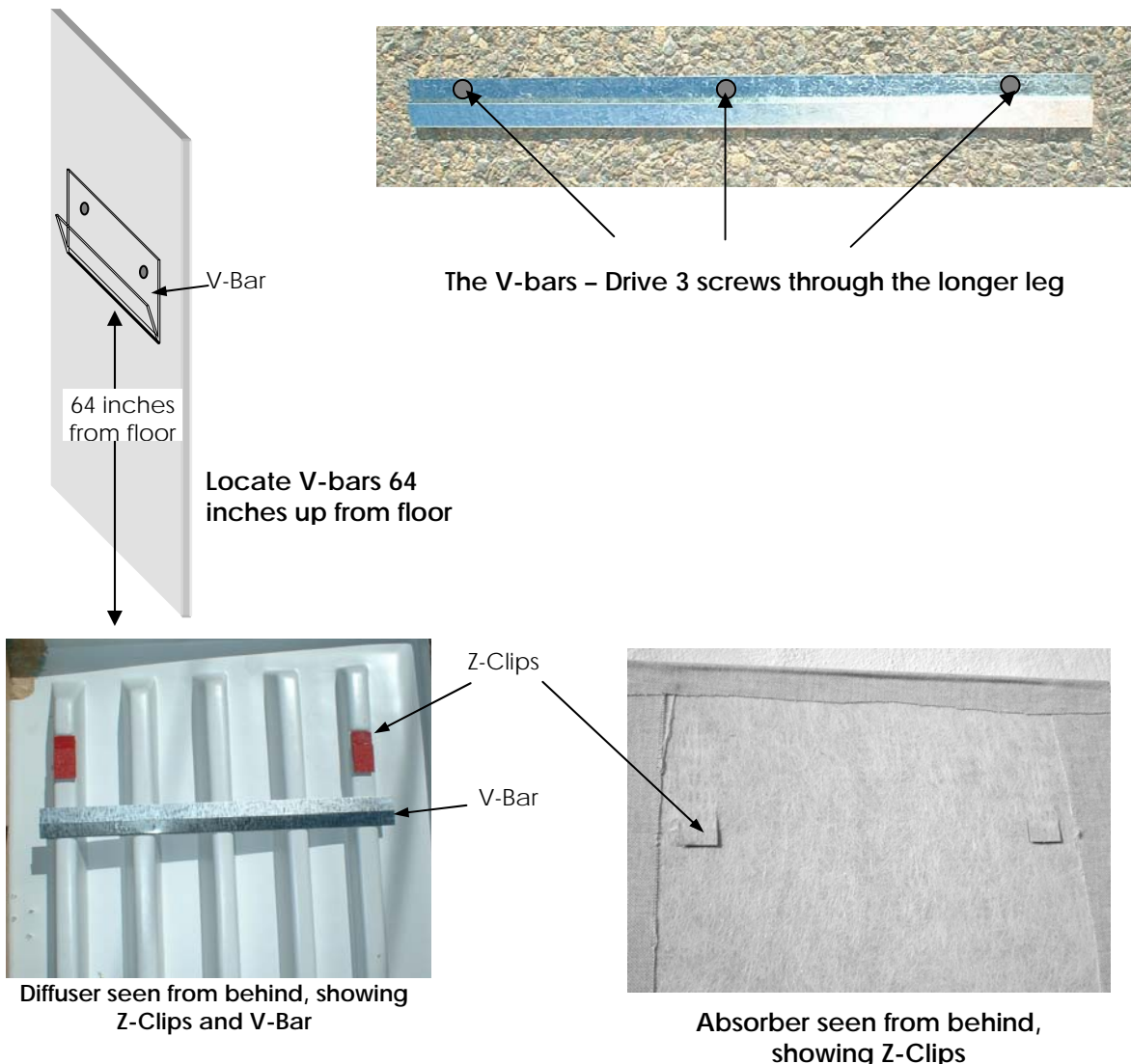
Note that some ceilings and floors are not flat and you may need to compensate for the differences. Please contact MSR immediately if you are missing any of the mounting V-bars. The bottom of the panels should be 2 feet (60cm) from the floor. Start with the diffuser panels

Hanging the panels:

Position the panels from the diagrams on the following pages

Mark the wall location for the panel

Fasten a V-Bar 64 inches (162cm) from the floor onto the wall using either drywall screws into studs, or using wallboard inserts and screws, or using other appropriate fasteners. Position the bar so that its wider portion is on the wall. Use a bubble level to ensure proper level of V-Bar.



Orient the panel so that the wedge form follows the layout diagram.
Hang the panel from the V-Bars.



Locate absorber and diffuser suspension V-bars



Hang panels from V-bars

Ceiling Panel

The floating Ceiling Panel is our solution to unwanted reflections from the ceiling. Research has shown that ceiling reflections are detrimental to good sound reproduction.

We recommend hanging Ceiling Panels at the first reflection points for the front speakers as shown in Fig 8.

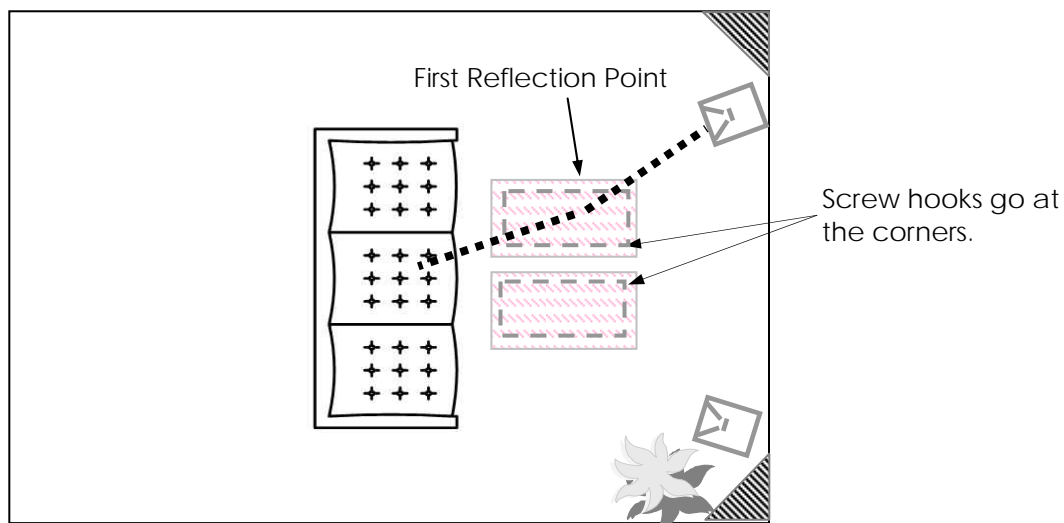
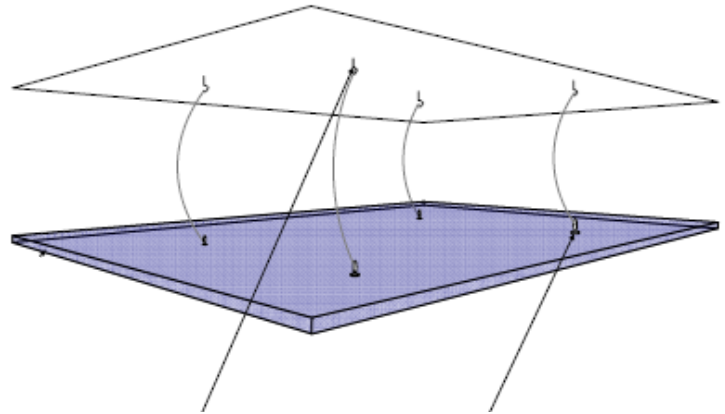


Fig 8 Ceiling First Reflection

Ceiling Panel Installation

- The Ceiling Panels are hung using Screw Hooks. You will need to supply a total of 4 screw hooks per panel (not included with the Concerto kit).
- Position the Ceiling Panels based on the diagrams and instructions from the preceding pages.
- Mark the first reflection points as described earlier.
- Determine the exact location on the ceiling for each Ceiling Panel. The center of each panel should line up with one of the first reflection points as marked on the ceiling.
- Screw 4 open screw hooks into the ceiling in a rectangular pattern 36 inches by 12 inches (90 x 30 cm), 6 inches (15cm) inside each edge of the Ceiling Panel. Make sure that you secure the screw hooks in joists or use wallboard anchors. After all 4 screw hooks are installed; simply lift the wire loops (pre-installed in the Ceiling Panel) over the hooks. The Ceiling Panel will float a few inches (cm) below the ceiling.



Standard screw hook secures into ceiling assembly. If wood backing is not available, utilize sheetrock anchor system prior to installing screw hooks

Cable loop on back side of cloud panels hang off screw hooks

Optional Special Products

SpringTrap®

A spring-loaded bass trap, the SpringTrap is our solution to very low frequency room resonance buildup in the range of 40 to 100Hz. This unique patented design, which received the Mix Magazine Certified Hit award, was presented as a research paper at AES in Amsterdam 2003. It consists of a triple-ported resonator system, activated by a large spring-loaded piston diaphragm.



The SpringTrap should be placed in an inconspicuous area in front of the mix position or in a corner on the floor. Experiment with the placement of the SpringTrap. Since it is a triangular device, you should have no trouble finding areas to place it.

Play bass-heavy program material and listen to the bass sound pressure at all the corners of the room. The louder the sound pressure, the stronger the standing wave resonance at that location, and the more effective the SpringTrap will be.

The SpringTrap is not included in the Dimension4 Concerto system. It is available as optional amendment.

Care Instructions

The fabric surfaces may be cleaned with mild, water-free solvents or water-based cleaning agents or foam. The wood surfaces may be cleaned with a lightly dampened cloth, or will oil soap.

Spares

If any mounting hardware, panel parts, or extra printed material are needed, please call MSR.

Shipping Weight & Dimensions Domestic (U.S.A)

Item	Units	Weight (lbs)	Box Dimensions (in)		
	Per Crate	Per Crate	L	W	H
Concerto 150	14	308	48	48	48
Concerto 250	18	373	48	48	48
Concerto 350	21	405	48	60	48
Concerto 450	25	510	48	72	48
Concerto 550	28	565	48	72	48
Concerto 650	32	630	48	72	48

International

Item	Units	Weight (Kg)	Box Dimensions (cm)		
	Per Box	Per Box	L	W	H
Concerto 150	14	140	121	121	121
Concerto 250	18	170	121	121	121
Concerto 350	21	184	121	152	121
Concerto 450	25	231	121	183	121
Concerto 550	28	257	121	183	121
Concerto 650	32	285	121	183	121

Note: Add 200lbs or 90Kg to above for estimated crate weight

Warranty

All Dimension4 Concerto modules are warranted to be free of manufacturing defects for a period of 12 months from the date of purchase.



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120709 Dimension4 Concerto Instruction Manual v2_8.5x11. Issue date July 9, 2012